1964

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

SPECIAL SNOW SURVEYS
as of
June 16-18, 1964

Report Prepared

By

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The mountain snow pack, which was about 50 percent above average on May 1 is still above average, and there is considerable concern that it may contribute to additional floodings.

Heavy precipitation with amounts up to 11 inches in 30 hours combined with the already ripe, fast melting snow pack, to produce severe floods on the Flathead, Marias, Teton and Sun Rivers the second week in June. Early reports indicate streamflow exceeded all previous records in this area. Many other streams and rivers in the state were near or above flood stage during this same period.

Special surveys were initiated when additional information on the high elevation snow pack was desired by the Forest Service and other State and Federal agencies. Two questions hoped to be answered by these late surveys. "Did this precipitation at higher elevations increase the existing snow pack?" and "Is the snow pack that remains large enough to present a potential for additional flooding?"

Even though no past records are available for surveys on this late date, it is felt that comparison between the May 1, May 15, June 1 and current surveys can shed some light on these questions.

There is a possibility that the snow pack was increased but only at extremely high elevations. Generally, the rain increased the rate of snow melt and contributed to the runoff as soils not snow covered were saturated from recent snow melt.

It appears that any drainage in the state with high elevation headwaters is still vulnerable to high runoff with warm temperatures and moderate to heavy precipitation. Data included in this report was forwarded to the U. S. Weather Bureau for their use in flood forecasting and other agencies involved in reservoir regulation as soon as it became available.

These special snow surveys were made by personnel of the Soil Conservation Service, Forest Service, Indian Irrigation Service and MSU School of Forestry.

SNOW SURVEY DATA

AS OF JUNE 16-18, 1964

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT* LAST YEAR	WATER CONTENT* AVERAGE
			COLUMBIA RIVER BASIN				
Kootenai River							
14A07	Weasel Divide	5450	6/17	9	5.0		
Flathead River							
13A17	Camp Misery	6400	6/17	68	38.0		
14A03	Hell Roaring Divide	5770	6/17	3	1.5		
13B07	North Fork Jocko	6330	6/16	42	24.2		
13B02	Spotted Bear Mountain	7000	6/17	No Snow			
13B05	Upper Holland Lake	7000	6/17	11	6.0		
Clark Fork River							
15C01	Hoodoo Creek	6200	6/16	35	18.3		
13C03	Skalkaho Summit	7260	6/16	17	8.6		
14B01	TV Mountain	6800	6/17	8	3.6		
Bitterroot River							
13D02	Gibbons Pass	7100	6/16	2	1.1		
14C07	Lost Horse	5940	6/16	32	18.0		
14C08	Twin Lakes	6510	6/16	47	27.4		

Note: Average of 10 samples on snow course with no snow on 7 samples. Had water not washed snow from 7 samples, measurement would probably have been about 38 inches deep and 20 inches water, at Upper Holland Lake.

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE

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(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
MISSOURI RIVER BASIN							
Gallatin River							
10D14	Arch Falls	7350	6/16	2	1.1		
11D09	Bear Basin	8150	6/16	22	10.6		
10D04	Devil's Slide	8100	6/16	40	20.4		
11D10	Little Park	7400	6/16	No Snow			
Sun-Teton-Marias Rivers							
13A11	Beaver Lake	5900	6/18	18	9.2		
12B07	Goat Mountain	7000	6/18	0	0		
12B04	Wrong Creek	5700	6/18	0	0		
12B03	Wrong Ridge	6800	6/18	4	2.6		
Judith-Musselshell-Missouri Main Stem Rivers							
10C06	Spur Park	8000	6/18	14	7.0		
10C01	Kings Hill	7500	6/18	4	1.6		
Upper Yellowstone River							
9D01	Camp Senia	7890	6/16	No Snow			
9D05	Grizzly Peak	8400	6/16	34	15.0		
10D06	Independence	8000	6/16	No Snow			
10D12	Monument Peak	9000	6/16	19	8.7		
9D04	Timberline Creek	8850	6/16	25	10.8		

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE